<u>IN THE CLAIMS</u>

Claim 1 has been amended as follows:

1. (Currently Amended) A method for determining the direction of incidence of an incoming audio signal from an acoustic source to a directional microphone system, having at least two microphones, comprising the steps of:

detecting said incoming audio signal with said at least two microphones and, in each of said at least two microphones, producing an output microphone signal therefrom;

generating at least two <u>phase-shifted</u> directional microphone signals by <u>phase shifting at least one output microphone signal relative to another output microphone signal and</u> combining the ~~respective~~ <u>phase-shifted</u> output microphone signals with respective weightings, the respective weightings defining a direction-dependent sensitivity distribution, having a minimum in one direction, for the respective directional microphone signals;

assessing each of said directional microphone signals with respect to a quantity that indicates an influence, on the respective directional microphone signal, by the associated direction-dependent sensitivity distribution; and

comparing the respective quantities of the respective directional microphone signals with each other to identify a quantity having [[a]] <u>an</u> exteme value, and determining the direction of incidence of said incoming audio signal as being the direction at which the minimum of the

direction-dependent sensitivity distribution for the directional microphone signal having said extreme value is located.

2. (Original) A method as claimed in claim 1 comprising employing energy in the respective directional microphone signals as said quantity, and determining the direction of the minimum of the direction-dependent sensitivity distribution having the least energy as being said direction of incidence.

3. (Original) A method as claimed in claim 1 comprising employing a reciprocal of energy of the respective directional microphone signals as said quantity, said reciprocal of said energy representing a probability that the direction of the minimum of the direction-dependent sensitivity distribution of the directional microphone signal associated with the reciprocal is said direction of incidence.

4. (Original) A method as claimed in claim 3 comprising combining the respective probabilities of the directional microphone signals to form a direction-resolved probability distribution, and determining the direction of incidence of said incoming audio signal from said probability distribution.

5. (Original) A method as claimed in claim 1 comprising setting the respective weightings to minimize the sensitivity of the directional microphone system for a signal source located in a selected direction with respect to the directional microphone system.

6. (Original) A method as claimed in claim 1 comprising selecting said weighting to embody an effect of an acoustic environment in which said directional microphone system is being used.

7. (Original) A method as claimed in claim 6 comprising determining the respective weightings by measuring the sensitivity of the directional microphone system at a head or a head simulation.

Claim 8 has been amended as follows:

8. (Currently Amended) A method as claimed in claim 1 wherein each of said microphone signals has an amplitude and a phase, and comprising employing a weighting having ~~at least one of~~ an amplitude factor and a phase factor for correcting at least one of the amplitude or the phase of at least one of said microphone signals.

9. (Original) A method as claimed in claim 1 comprising storing said weighting as a frequency-dependent characteristic.

10. (Original) A method as claimed in claim 1 comprising reading the respective weightings from a memory.

11. (Original) A method as claimed in claim 1 comprising generating said directional microphone signals substantially simultaneously.

12. (Original) A method as claimed in claim 1 comprising varying the respective weightings for two or more of said directional microphone signals to successively produce respective directional microphone signals having direction-dependent sensitivity distributions.

13. (Original) A method as claimed in claim 1 wherein each of said microphone signals has a frequency range, and comprising subdividing each frequency range into a plurality of frequency bands, each having a microphone signal component therein, and using said microphone signal components as said microphone signals.

14. (Original) A method as claimed in claim 13 comprising assessing the respective quantities of the respective directional microphone signals in at least two of said frequency bands.

15. (Original) A method as claimed in claim 1 comprising weighting the respective microphone signals from the microphones in said directional microphone system in pairs to produce said directional microphone signal.

16. (Original) A method as claimed in claim 1 wherein said incoming audio signal is a first incoming audio signal from a first source, and comprising detecting a second incoming audio signal from a second signal source with said microphones in said directional microphone system, and determining the direction of incidence of said second incoming audio signal from said quantity.

17. (Original) A method as claimed in claim 16 comprising assessing said quantities for said first and second incoming audio signals in a same frequency band by correlation.

18. (Original) A method as claimed in claim 17 comprising assessing said first and second incoming audio signals by correlation according to an echo relationship.

19. (Original) A method as claimed in claim 16 comprising assessing said quantities for said first and second incoming audio signals in respectively different frequency bands by correlation.

20. (Original) A method as claimed in claim 19 comprising assessing said first and second incoming audio signals by correlation according to an echo relationship.

21. (Original) A method as claimed in claim 1 comprising experimentally determining the direction of the minimum of each direction-dependent sensitivity

distribution using an experimental signal source with said directional microphone system.

22. (Original) A method as claimed in claim 1 comprising determining the direction of the minimum of the direction-dependent sensitivity distribution by calculation with measured transfer functions.

Claim 23 has been amended as follows:

23. (Currently Amended) An apparatus for determining a direction of incidence of an incoming audio signal comprising:

a directional microphone system having at least two microphones for detecting said incoming audio signal, each of said at least two microphones generating a microphone signal therefrom;

<u>a phase-shifter that phase-shifts at least one microphone signal of said system relative to another microphone signal of said system;</u>

weighting units for respectively weighting said <u>phase-shifted</u> microphone signals for producing at least two directional microphone signals, the respective weightings defining a direction-dependent sensitivity distribution for each of said directional microphone signals;

an assessment unit for assessing the respective directional microphone signals with respect to a quantity representing an influence of the direction-dependent sensitivity distribution on the directional microphone signal; and

a determination unit that identifies one of said directional microphone signals having an extreme value of said quantity compared to the other directional microphone signals, and for determining the direction of

incidence of said incoming audio signal as being a direction in which a minimum of the direction-dependent sensitivity distribution of said one of said directional microphone signals is located.

24. ((Original) An apparatus as claimed in claim 23 comprising, for each of said microphones, a filter bank connected thereto for subdividing the microphone signal from the microphone signal connected thereto into a plurality of frequency bands each frequency band having an output at which a signal component of the microphone signal in that frequency band is present, with respective outputs of the respective filter banks in the same frequency band being connected in pairs to said weighting unit, said weighting unit comprising at least one of an amplitude unit for varying an amplitude of the signal component and a phase unit for shifting the phase of the signal component.

25. (Original) An apparatus as claimed in claim 24 wherein said weighting unit comprises both said amplitude units and said phase units, and wherein said amplitude units and said phase unit operate jointly on each signal component.

26. (Original) An apparatus as claimed in claim 24 wherein said assessment unit comprises a plurality of assessment subunits respectively operating in different ones of said frequency bands for assessing said quantity in the different frequency bands, and an analysis unit connected to said assessment subunits for generating, from the assessment of the quantities in the respectively different frequency bands, an acoustic environment analysis result.

Claim 27 has been amended as follows:

27. (Currently Amended) An apparatus as claimed in claim ~~25~~ 26 wherein said analysis result generates said acoustic environment analysis result by a correlation analysis of a time response in the different frequency bands.